

METHOD AND APPARATUS FOR AUTOMATIC DETECTION OF A SERIAL
PERIPHERAL INTERFACE (SPI) DEVICE MEMORY SIZE

ABSTRACT OF THE INVENTION

5

A method and apparatus for automatically detecting the memory size of a serial peripheral interface (SPI) device. Specifically, the present invention describes an SPI interface circuit including a memory controller chip, an EEPROM, a sensing circuit, and a pulldown resistor. In one embodiment, a "READ" command from the controller to the SPI device is sent in a first byte of information transferred between the controller and SPI device. The data Input/Output (D-IO) pin is then driven low for the second byte of information. Next, the D-IO pin is floated and the pin assumes a logic "0" level due to a pulldown resistor. Subsequently, a sensing circuit can detect when and if a non-zero data value passes from the SPI device to the memory controller chip to determine the memory size of the SPI device or the absence of an SPI device.